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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/578,631

05/09/2006

James Jago

US030465US

1444

28159

7590

05/12/2009

PHILIPS INTELLECTUAL PROPERTY & STANDARDS

P.O. BOX 3001

Briarcliff Manor, NY 10510-8001

EXAMINER

ROZANSKI, MICHAEL T

ART UNIT

PAPER NUMBER

3768

MAIL DATE

DELIVERY MODE

05/12/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--|------------------------------------|--|
| Office Action Summary | Application No. 10/578,631 | Applicant(s) JAGO, JAMES | |
| | Examiner MICHAEL T. ROZANSKI | Art Unit 3768 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claims 1-6 are labeled as “withdrawn” and should be changed to “canceled.”

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haider et al (US 6,346,079).

Haider et al disclose a method and apparatus for adaptive frame rate adjustment as a function of target motion in an ultrasound imaging system. When target (i.e. tissue) motion is high (rapid target motion results from a moving transducer in a so-called search mode and/or from a stationary transducer with fast-moving tissue), high frame rate is more important and image quality (i.e. noise reduction) can be somewhat reduced. When target motion is low, image quality is more important (col 2, lines 30-45). The frame rate depends upon the number of transmit firings in an image frame. By reducing the number of firings, the frame rate is increased. Additionally, frame rate depends upon the degree of frame averaging, or image persistence. In Haider et al, the target motion is estimated, and this estimate is used to control the number of transmit

Art Unit: 3768

firings per frame and/or the degree of frame averaging (col 2, line 46-col 3, line 3).

Therefore, image frames are initially created using a particular frame rate and a particular degree of frame averaging. Then, the frames are analyzed in a frame-to-frame estimation of target motion. Based on this estimation, the frame rate is adjusted along with frame averaging. The ultrasound image is ultimately displayed (see figure 1).

Haider et al do not specifically disclose entering a minimum acceptable frame rate. Rather, Haider et al system estimates target motion, and then determines the number of frames to be averaged and the frame rate. The system relates motion to frame rate and number of frames averaged. In Applicant's specification (bottom of pg 3), it is stated that the frame rate may be entered by a user or it may be determined based on the type of ultrasound examination being conducted or the rate at which imaged physiological structures are moving or are expected to move. Therefore, Applicant places no criticality on any one of these four equivalents. It would have been obvious to the skilled artisan to modify Haider et al to permit entry by a user control because there is no criticality on whether a frame rate is entered by a user or whether it is determined based on movement of physiological structures.

Response to Arguments

Applicant's arguments with respect to claims 11-18 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Art Unit: 3768

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL T. ROZANSKI whose telephone number is (571)272-1648. The examiner can normally be reached on Monday - Friday, 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 571-272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Eric F Winakur/
Primary Examiner, Art Unit 3768

MR